
PAYETTE SOIL & WATER CONSERVATION DISTRICT

5 Year Plan 2023 - 2028

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Executive Summary

Conservation districts are established under state law to carry out natural resource management programs at a local level by providing technical assistance and tools to manage and protect land and water resources. The Payette Soil and Water Conservation District is one of 50 Conservation Districts in Idaho, each of which is a political subdivision of State government but not a State agency.

Conservation Districts assist private landowners and users in the conservation and enhancement of Idaho's natural resources, coordinating and implementing conservation programs, and channeling expertise from all levels of government into action at the local level. Programs are non-regulatory, providing science-based technical assistance, incentive-based financial programs, and informational and educational programs.

Payette Soil and Water Conservation District (PSWCD) partners with local, state and federal entities in order to provide educational opportunities to increase awareness of sustainable agriculture such as maintaining and improving soil fertility. In 2010, PSWCD held its first Soil Health Symposium to bring local landowners together to talk about what was being done at the local level to improve soil health. The Symposium featured members of the scientific community who presented useful information on a broader scale. PSWCD and its partners have made the Symposium an annual event each February at the Four Rivers Cultural Center in Ontario, Oregon. To avoid gathering during the COVID pandemic; during the COVID pandemic, the district took a 2-year hiatus (2021 – 2022) from presenting the symposium but returned to in-person format with high attendance in 2023.

The district seeks funding sources and partners with landowners to provide financial incentives for best management practices (BMPs) to improve soil health and water quality. PSWCD works with USDA's Natural Resources Conservation Service (NRCS) and the Idaho Soil and Water Conservation Commission, which provide financial and technical assistance to landowners and operators through a variety of local, state, and federal programs. PSWCD also works at the county level regarding agriculture land preservation.

Land Use

PSWCD is located within the boundaries of Payette County, in the western part of Idaho bordering the Snake River and Oregon, and includes the cities of Fruitland, New Plymouth, and Payette.

Payette County encompasses 261,120 acres or 408 square miles and is geographically located in the Payette section of the Columbia Plateau. The flood plains of the Payette and Snake Rivers stretch up to two miles in width and are bordered by terraces at various elevations above the rivers. Soils are predominately silt and/or sandy loams in the valleys and terraces. The elevation in the district ranges from approximately 2,000 to 4,000 feet.

Climate is semiarid with cold winters and hot, dry summers. The average temperature is 28°F in the winter and 82°F in the summer. The average precipitation in Payette County is 11 inches per year.

Land use in Payette County is mainly agricultural with irrigated cropland and pastures, along with upland grazing of cattle and sheep, totaling approximately 163,000 acres. Thirty six percent, or 59,150 acres, is

under some form of irrigation, with water supplied directly through in-river diversions, or delivered via a series of canals from the Black Canyon Reservoir. Land ownership is mostly private with public lands found in the uplands and river bottom. Agriculture has dominated county land use since early settlement and remains the primary social and economic base. The main crops grown in Payette County include hay, wheat, corn, mint, sugar beets, vegetables, and seed crops. Dairy and livestock feeding operations are also an essential component of Payette County agriculture.

Payette County 2017 Census of Agriculture

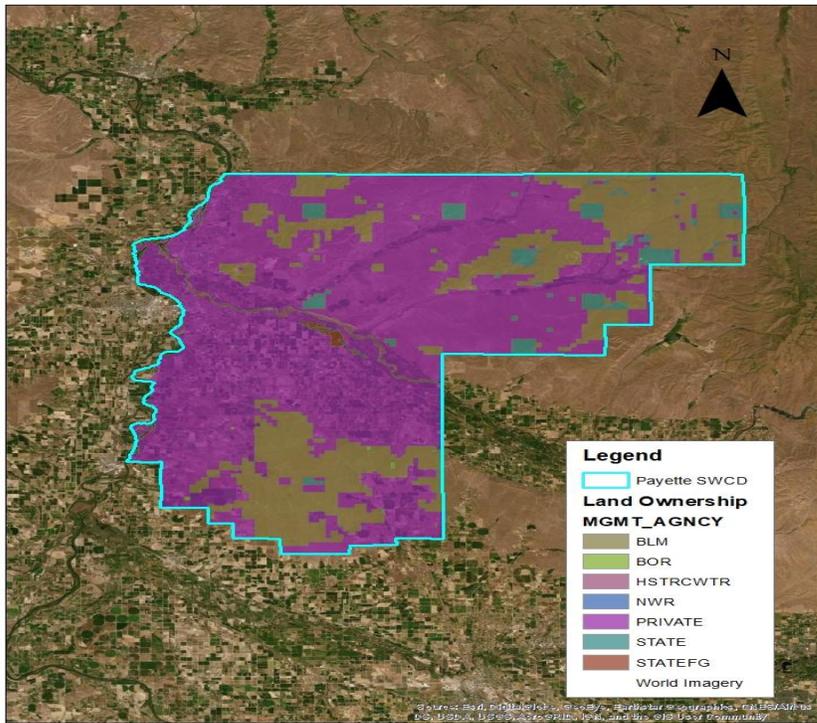
| | |
|-------------------------------|---------|
| Number of farms | 640 |
| Land in farms (acres) | 162,622 |
| Average size of farms (acres) | 254 |
| CROPLAND (acres) | 57,361 |
| PASTURELAND (acres) | 98,955 |
| IRRIGATED ACRES | 59,150 |

Source:

https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Idaho/cp16075.pdf

Payette County Landownership (2021 Payette County Conditions Report)

| GIS Landownership | Acres |
|--------------------------|--------------|
| Private | 185,656 |
| BLM | 64,590 |
| Other Federal | 84 |
| ID F&G | 855 |
| State | 8,475 |
| County/Municipal | 2,043 |



Hydrology

Payette County contains the mouth of the Payette River where it empties into the Snake River which forms part of the western border of Idaho. Big Willow and Little Willow Creeks flow into the Payette River from the Washington and Gem Counties uplands to the northeast. Little Willow and Big Willow Creeks, the Payette River, and the Snake River are all on the 303(d) list (“impaired” and “threatened” waters listed in [Section 303\(d\) of the Clean Water Act](#)) because they do not meet their designated uses and exceed the total maximum daily loads (TMDLs) for those waterbodies. Pollutants impacting water quality in these waterbodies include sediment and nutrients from non-point sources.

The Snake River borders Payette County for approximately 24 miles. This section of the Snake River is referred to as Middle Snake-Payette, Hydrologic Unit Code 17050115. The Idaho Department of Environmental Quality and Oregon Environmental Quality collaborated on the Snake River - Hells Canyon TMDL which includes the Middle Snake-Payette section, which was approved by the Environmental Protection Agency (EPA) in 2004. The document can be found at the following link: <https://www2.deq.idaho.gov/admin/LEIA/api/document/download/12095>

Idaho Department of Environmental Quality subbasin assessments and TMDL plans for the Lower Payette River Hydrologic Unit Code 17050122 have been approved by the EPA. ISWCC, in cooperation with PSWCD and the Lower Payette River Watershed Advisory Group have completed Implementation Plans for the Lower Payette River watershed, 23 percent of which is located in PSWCD. All documents can be found at the following link:

https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_042568.pdf

Economic Conditions and Outlook

According to the United States Census Bureau website information reported from July 2020, the population in Payette County was 25,386. The median income for a household in the county was \$50,579. About 13.4% of the population were below the poverty line. The most common employment sectors in Payette County are agriculture, manufacturing, retail trade, health care, and social assistance.

Natural Resource Assessment

USDA National Agricultural Statistics Service 2017 Payette County Profile states that acreage in farming remained the same from 2012 to 2017 in the PSWCD area although the number of farms declined, reflecting consolidation in the industry. 98% are family farms.

The farm size shifted as the number of small farms (<10 acres) and the number of large farms (>500 acres) both increased, whereas the number of mid-size farms declined. While the Payette County economy is still predominantly agricultural, data from the 2017 USDA Census of Agriculture indicate an overall decline in the agricultural market since the last survey conducted in 2012. Market valuation of products sold is down 29% and net farm income dropped 33% over the five-year period.

Idaho grew by 2.9% in 2019 and Payette County has had an increased growth rate of 3.4% from 2020-2021 according to the most recent United States census data. As the population increases in neighboring Ada and Canyon Counties more people are moving into Payette County and farmland preservation is a priority for the PSWCD as well as local citizens and government.

Surface Water Quality

Water quality remains a priority in the district. Sources of pollutants include both point sources and nonpoint sources. Point sources are limited mainly to municipal wastewater treatment plants and confined animal feeding operations. Nonpoint sources are associated with agricultural, urban, suburban, and rural areas. BMPs to address water quality degradation are implemented in the district on a voluntary basis. The NRCS provides technical and financial assistance through programs such as the Environmental Quality Incentives Program. This is the most reliable funding source available for landowners in the district and provides financial assistance for water quality BMPs such as converting from surface to pivot sprinkler irrigation.

The PSWCD submits proposals to IDEQ for Nonpoint Source Management §319 Subgrants and Idaho State Agriculture BMP Grants. The grant programs are competitive throughout the state by use of a ranking system. Funding is inconsistent. Grant funds awarded to PSWCD in the past 10 years have been provided to district landowners in the Little Willow Creek, Lower Payette River, and mid-Snake River watersheds to implement BMPs, including installation of wheel line and center pivot sprinkler irrigation systems, and sediment basins to capture tail water from surface irrigated cropland.

Agricultural practices are slowly shifting in the district. With more knowledge of soil health principles there is more adoption of practices to improve soil health, such as using cover crops, applying minimum tillage practices, and replacing chemical fertilizer with compost. More landowners are also using livestock to improve soil health for crop production. The PSWCD will continue hosting the Annual Soil Health Symposium with the assistance of financial partners such as ISWCC, NRCS, and other local Conservation Districts, assuming local state and county health guidelines allow.

Education is a priority for the PSWCD and the annual Soil Health Symposium provides local education and access to resources which landowners and operators can utilize on their operations and improve soil health.

Nitrate Priority Areas (NPAs)

Nitrate is the most common and widespread contaminant in Idaho's ground water and can cause health problems. The principal health concern is serious illness for infants less than 6 months old if they drink water with nitrate concentrations greater than 10 mg/L (drinking water standards). This contaminant can cause methemoglobinemia, whose symptoms include shortness of breath and bluish skin, and if left untreated can cause death.

Nitrate comes from fertilizers, septic systems, livestock operations, and industries including food processing. DEQ uses results of nitrate monitoring—the findings from laboratory analysis of ground water samples—from throughout the state. Nitrate monitoring data are used to define areas with high nitrate concentrations. Geostatistical methods are applied that use criteria based on drinking water standards. An area is considered a NPA if 25% of the wells sampled in the area have at least 5 mg/L, which is one-half the drinking water standard of 10 mg/L. The nitrate priority areas are ranked (prioritized) in order of severity (one is the most impacted), based on factors such as the population and number of public water systems in the area, water quality trends, and beneficial uses in addition to drinking water. DEQ aids communities that are developing management strategies related to the land uses in these areas. Public education is a main component of the strategies, which are focused on improving ground water quality and are compiled in a ground water quality improvement plan. DEQ also coordinates with other agencies to implement management strategies, and reevaluates the areas every 5 years to determine if the strategies are effectively improving ground water quality. As part of the goal to restore degraded ground water, DEQ has developed a list of NPAs throughout the state where ground water has been compromised due to nitrate contamination. The list ranks NPAs in the state based on severity of nitrate degradation. The Lower Payette is ranked number 18 in the statewide ranking of 2020 (NPAs 2020).

Idaho's Ground Water Quality Protection Act of 1989 (Idaho Code 39-1) authorized a comprehensive approach for maintaining and improving Idaho's ground water quality. The 1996 Idaho Ground Water Quality Plan (GWQP) was written as a result of the act and outlines the various state and local responsibilities for protecting Idaho's ground water quality (Ground Water Quality Council 1996). IDEQ is designated as the primary agency to coordinate and administer ground water quality protection programs for the state of Idaho.

People who rely on private wells for their drinking water supply are particularly at risk of exposure to high levels of nitrate and other contaminants. Private well owners are not required to test their water on a regular basis and may not be aware a problem exists. Public water systems (PWSs) are subject to the Safe Drinking Water Act and are required to test their water regularly. Nitrate levels in public drinking water must be below 10 mg/L MCL.

The Payette County Ground Water Quality Improvement and Drinking Water Source Protection Plan was written by Idaho Department of Environmental Quality in 2010 and updated in 2018. The information provided in the plan is an educational and informational resource for local governments and land-management entities. It is intended to provide background information for decision making and to help

prioritize and coordinate water quality related activities throughout Payette County.
<https://www2.deq.idaho.gov/admin/LEIA/api/document/download/4675>

Ground Water Quality is a priority for PSWCD, and the District will continue to partner with local, state and federal agencies to assist with implementation of BMPs which reduce nitrate loading of the ground water, thereby improving ground water quality.

District Operations

Payette Soil and Water Conservation District receives funding through general funds appropriated by the Idaho legislature to the Idaho Soil and Water Conservation Commission (ISWCC). Commission funding is allocated to PSWCD as 2 different funding sources (Base and Match). Additional district funding is solicited from local support. PSWCD’s Board of Supervisors present district activities every year to Payette County, City of Payette, Fruitland, and New Plymouth, and some local irrigation districts and water user associations, which donate a small amount of funding each year.

| Funding Sources - FY2023 | Amount |
|---------------------------------|---------------|
| ISWCC Base Funding | \$14,500 |
| Local donated funds | \$ 7,000 |
| ISWCC Match | \$11,222 |

Conservation Districts in Idaho can receive up to a 2:1 match from the Idaho Legislature for every dollar they bring in locally. The match funding varies year to year and has never been equal to the potential full match of 2:1.

In FY2023, the district employed a part-time administrative assistant, paid all expenses for leased office space and supplies, and paid local organization dues and all other expenses. The district enlists technical assistance from ISWCC to write and submit grant proposals as they come up for funding for landowner implementation of BMPs. The district has utilized two grant programs to address Payette County landowner requests for financial assistance to implement best management practices. These include the Federal Nonpoint Source Management 319 Subgrants and the Idaho State Agriculture BMP grants, both managed by IDEQ. The grant programs are competitive across the state with variable ranking values.



FY2024 (7/1/23 – 6/30/24) Annual Plan of Work Payette Soil and Water Conservation District

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County Served: Payette Legislative District: 9

Mission of the Payette Soil and Water Conservation District

- Payette Soil and Water Conservation District will work towards conserving and enhancing natural resources for the economic and environmental benefit of present and future generations in Payette County using educational, financial, and technical assistance to promote voluntary resource conservation practices.

Trends & Issues Impacting Conservation in the Payette Soil and Water Conservation District

- Water Quality: TMDL development and implementation
- Irrigated Cropland: Promote adoption of soil and water conservation practices
- Fish and Wildlife: Support and approve wildlife resource management plans; threatened and endangered species
- Pasture and Hay: Assist with planning and application of conservation on pasture and hay land
- Rangeland: Assist with planning and application of conservation on rangeland
- Other Impacts: Property tax increases, rural subdivision of farm and range lands; availability of funds for district operations
- Planning and Zoning: Be involved in listening and understanding the needs and challenges of a growing county, and how we can help manage a balance between conservation and growth.

Projects Planned, Coordinated or Managed by the Payette Soil and Water Conservation District

- Continue to host the annual Soil Health Symposium to educate producers on techniques to improve soil health, specifically relating to conventional farming practices.
- Apply for 319 grants for projects within the boundaries of TMDL's.
- Coordinate efforts to address TMDLs in Payette County and surrounding watersheds
- Seek out grants when opportunity arises

Funding Sources for District Operations and Projects Coordinated

- State of Idaho
- Payette County
- Cities of Payette and New Plymouth and Fruitland
- Irrigation districts and companies
- Payette River Water Users Association
- Pursue other funding sources, private and public.



FY2024 (7/1/23 – 6/30/24) Annual Plan of Work Payette Soil and Water Conservation District

Conservation District Operations Objective: Payette SWCD operations provide the overall framework necessary for staff and an all-volunteer board to fulfill goals and priorities throughout the year. Including informing the Payette County Commissioners, City Councils, State Legislators, and the public about district activities and conservation issues. The following activities support that function:



Each district supervisor will try to attend at least one IASCD conference.



Participate in USDA Local Working Group meetings



Participate as a member of the West Central Highlands RC&D Council



Continue to meet with the cities and county to discuss district accomplishments and to secure funding



Actively support the IASCD with dues and participation in annual and division meetings, funding permitting



Promote the importance of agriculture and natural resources conservation in Payette County.



Seek other groups and/or organizations to promote PSWCD's programs



Investigate methods to increase funding for district operations



Schedule and hold monthly PSWCD board meetings



Develop and submit Conservation District Annual Plan of Work, updating 5-Year Plan



Complete Financial and Match Report



Maintain Financial Management system using QuickBooks



Promote training to develop new skills and knowledge for staff and supervisors



FY2024 (7/1/23 – 6/30/24) Annual Plan of Work Payette Soil and Water Conservation District

Conservation District Priority 1: Information and Education

Objective: Educate producers, ranchers, and the public about natural resources conservation.

Goal(s): Increase the public awareness of the importance of conserving our natural resources.

| Actions | Date | Agency | Goals Achieved |
|--|-----------|--------------------------------------|----------------|
| Continue to seek out partners in planning Annual Soil Health Symposium. | Summer-23 | PSWCD Supervisors, PSWCD Staff, NRCS | |
| Host 12 th Annual Soil Health Symposium | Feb-24 | PSWCD Supervisors, PSWCD Staff, NRCS | |
| Update District website: www.payetteswcd.org | Quarterly | PSWCD Staff | |
| Provide an Information Booth at Payette County Fair | Aug-23 | PSWCD Staff | |
| Promote conservation programs available for landowners from partners | Ongoing | PSWCD Supervisors, PSWCD Staff | |
| Promote the conservation district and natural resource educational programs to local entities. | Ongoing | PSWCD Supervisors, PSWCD Staff | |
| Produce and distribute district newsletter and/or informational brochures | TBD | PSWCD Supervisors, PSWCD Staff | |
| Public tour of resource concerns and projects | Fall-23 | PSWCD Supervisors, PSWCD Staff | |
| Create brochures for home owners constructing on small acreages | TBD | PSWCD Supervisors, PSWCD Staff | |



FY2024 (7/1/23 – 6/30/24) Annual Plan of Work Payette Soil and Water Conservation District

Conservation District Priority 2: Water Quality

Objective: Assist district cooperators with planning and application of Water Quality Best Management Practices.

Goal(s): To meet state water quality standards, regulations, and requirements

| Actions | Date | Agency | Goals Achieved |
|---|--------------------|--|----------------|
| Identify sources of funding and associated programs for water quality projects in Payette County | July-23 June-24 | PSWCD Supervisors, PSWCD Staff, NRCS | |
| Provide support for the implementation of the Lower Payette River TMDL, Boise River TMDL, Little Willow TMDL, Big Willow TMDL, and Middle Snake Hells Canyon TMDL | July-23 June-24 | PSWCD Supervisors, PSWCD Staff, NRCS | |
| Conservation application to improve water quality | July-23 June-24 | PSWCD Staff, NRCS | |
| Apply conservation practices to improve irrigation efficiency | July-23 June-24 | PSWCD Staff, NRCS | |
| Promote best management practices for containment and application of animal waste, reducing the impact of animal waste on natural resources | July-23 June-24 | PSWCD Staff, NRCS | |
| Cooperate with Idaho Power Water Quality Improvement | July-23 June-24 | PSWCD Supervisors, PSWCD Staff, NRCS | |



FY2024 (7/1/23 – 6/30/24) Annual Plan of Work Payette Soil and Water Conservation District

Conservation District Priority 3: Irrigated Cropland

Objective: Promote soil and water conservation on irrigated lands

Goal(s): To work with cooperators to plan and implement BMPs to conserve soil & water.

| Actions | Date | Agency | Goals Achieved |
|--|--------------------|--------|----------------|
| Develop and approve conservation plans on irrigated land (crop, pasture and hay) | July-23 June-24 | NRCS | |
| Implement BMPs | July-23 June-24 | NRCS | |
| Develop and approve conservation plans on range, pasture and hay land | July-23 June-24 | NRCS | |

Conservation District Priority 4: Fish and Wildlife

Objective: Maintain and enhance wildlife resource conservation

Goal(s): Conservation of fish and wildlife resources

| Actions | Date | Agency | Goals Achieved |
|---|--------------------|--------|----------------|
| Develop conservation plans to address wildlife resources. | July-23 June-24 | NRCS | |
| Apply conservation practices to improve fish and wildlife habitat (wetland, recreational and enhancement) | July-23 June-24 | NRCS | |



FY2024 (7/1/23 – 6/30/24) Annual Plan of Work Payette Soil and Water Conservation District

Conservation District Priority 5: Rangeland

Objective: Assist with planning and application of conservation plans on rangeland, pasture and hay land

Goal(s): To protect and improve rangeland, pasture and hay land through proper resource treatment

| Actions | Date | Agency | Goals Achieved |
|---|--------------------|--------|----------------|
| Develop and approve conservation plans on range, pasture and hay land | July-23 June-24 | NRCS | |
| Implement conservation practices for grazing land resource protection | July-23 June-24 | NRCS | |